

User's Manual

Iowa Self Assessment Program for Wastewater Treatment Facilities

Software Version 1.0

Developed by

**Department of Civil & Construction Engineering
Iowa State University, Ames, IA**

Iowa Department of Natural Resources

ISAP User's Manual

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prepared by

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PREFACE

The Iowa Self Assessment Program (ISAP) was developed to provide an information management tool for owners and operators of municipal wastewater treatment facilities. The overall intent of this program is to facilitate compliance with the provisions of the Clean Water Act, the Iowa Water Quality Standards, and the treatment facility National Pollutant Discharge Elimination System (NPDES) permit limits that derive from the federal and state water quality regulations.

The ISAP is the end product of the Iowa Municipal Pollution Prevention Project (MPPP) to Evaluate the Health of POTW's. The development work was completed at the Department of Civil & Construction Engineering at Iowa State University under contract with the Iowa Department of Natural Resources (IDNR). The project was funded by the U.S Environmental Protection Agency. An advisory committee consisting of operations personnel, consulting engineers, and IDNR staff, provided valuable input and guidance during the term of the project. The objectives of the Iowa MWPPP included: (1) identifying key parameters for assessing the relative health of Iowa POTW's (2) testing the parameters with real historical monitoring data from Iowa POTW's and (3) development of a user friendly computer software program for Iowa cities to evaluate the health of their wastewater treatment facility. The purpose of the project, and the focus of the ISAP, is to provide an information management and analysis tool to identify operational and NPDES compliance problems in publicly owned treatment works (POTW's). The ISAP provides the tools necessary to identify these problems in the early stages so that planning and implementation of improvements can be accomplished prior to violation of NPDES permit conditions. Results generated from the ISAP can be used as an integral part of the annual O&M report to the city council or as an annual facility assessment provided to the IDNR.

The built in analysis tools in the ISAP computer program provide a user friendly method to prepare data summaries, written and graphical report formats, and a facility self assessment scoring system to allow comparison of plant performance for single or multiple years. The scoring system for the self assessment is based on a historical analysis of permit violations for all 81 of Iowa's major ($Q > 1.0$ MGD) wastewater treatment facilities for the years 1990 - 1994. The parameters selected for the self assessment were carefully selected to represent the parameters typically responsible for noncompliance.

The ISAP is a computer program developed for the Microsoft Windows® operating system. The program requires Windows version 3.1 or later. The minimum hardware requirements are a 80386 processor and 4MB of system memory (RAM). The recommended hardware is a 80486 processor and 8 MB of RAM. The program was developed using Visual Basic for Windows, version 3.0, but Visual Basic for Windows is not needed to run the program on your computer. The program utilizes the standard Windows graphical interface, and is compatible with other Windows applications, particularly spreadsheet programs which may already be in use at the treatment plant.

The ISAP can be used by treatment facility staff to evaluate past and current plant performance, evaluate trends in performance over time, investigate possible reasons for noncompliance, and identify possible areas of future noncompliance.

The ability to analyze and manage information in an accurate and timely manner is a manager's most effective tool to achieve a total and top quality treatment facility operation. Computers, and the application software that runs on them, have become standard equipment in many municipal treatment facilities. This is first version of the ISAP software program. We are pleased at Iowa State University to have the opportunity to contribute a computer software management tool that will hopefully enhance your ability to make informed decisions about the health and operational status of your wastewater treatment facility.

As with all complex computer programs, there is always the possibility that some problems will be encountered in spite of the testing that has already been accomplished. If you encounter a problem, or have suggestions for additional features in the program, please contact me. We will address the problem as expeditiously as possible.

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